

is important.¹ The early popularity of this operation has faded, and it should be undertaken only after full investigation and when other remedies have failed.

Psychotherapy may be combined with any physical method or used alone. As a rule obsessional patients are intelligent, but they can be extremely obstinate; they plead for help, but resist treatment to an astonishing extent. This is part of the disorder, and does not imply an overdose of original sin. Hypnosis is almost useless, and analysis of the passive type is disappointing. Provided the co-operation of the patient can be gained, relief may be obtained if the analyst is prepared to take an active part in the analysis, and in particular to give attention to the "time factor" in the symptomatology²: the fear of the future; the urge to make time stand still; and in the background the fear of death.

So far as age is considered, a man aged 44 would be acceptable for any form of treatment.

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- ¹ Sargant, W., and Slater, E., *Physical Methods of Treatment in Psychiatry*, 3rd ed., 1954. E. and S. Livingstone, Edinburgh and London.
² Bennet, E. A., and Shorvon, H. J., *Proc. roy. Soc. Med.*, 1957, 50, 211.

Inheritance of Deaf-mutism

Q.—*What risk of having children affected with deaf-mutism is likely in one of my patients who has a mother, uncle, and aunt who are congenitally deaf and dumb, and whose mother had a stillborn child with spina bifida. The patient's husband is not a blood relative.*

A.—There is little risk of this patient having a child with deaf-mutism or with spina bifida. The majority of children with deaf mutism are homozygous for one or other of a small series of recessive genes.^{1,2} The probability that this is the case in this family is increased by the fact that the parents of the affected individuals were second or third cousins. Accordingly, your patient is probably heterozygous for one of these genes, but cannot have a deaf child unless her spouse (who is not a blood relative) is also heterozygous for the same gene.

The risk of a child being affected with spina bifida is also small. The genetic mechanisms predisposing to spina bifida are not clearly understood, but empirically it is known that the risk of a nephew or niece of an affected individual also being affected is of the order of only about 1%.

REFERENCES

- ¹ Stevenson, A. C., and Cheeseman, E. A., *Ann. hum. Genet.*, 1956, 20, 177.
² Chung, C. S., Robison, O. W., and Morton, N. E., *ibid.*, 1959, 23, 357.

Transporting Cripples Up Stairs

Q.—*My wife has recently had an operation for arthrodesis of the right hip. Is there any contrivance which runs on rails, or which can be propelled by hand or by some other means, for transporting her up and down a short staircase?*

A.—Anybody with a disability which makes stairs impracticable should carry out alterations to enable them to live on the ground floor, or alternatively move into bungalow accommodation. Lifts and chair escalators are available but cost about £500, and it is usually impossible to get escalators to negotiate corners. Also, as with any electrical appliance, there is always the risk of power failure. Professor E. A. Pask and Mr. N. Burn recently described¹ an experimental pneumatic lift made by them which would elevate a person from the ground to the first floor of a house. It consisted of a cage resting on bellows which, when blown up, raised the cage. The apparatus has not yet been produced on a commercial basis, but the authors think it could be and that it might provide a one-patient lift in most homes for £150 to £200.

REFERENCE

- ¹ Pask, E. A., and Burn, N., *Brit. med. J.*, 1960, 2, 939.

Ultrasonically Treated Milk

Q.—*It is said that exposure to ultrasonic waves conserves the composition and qualities of milk for a long time, even when exposed to tropical conditions. If this is so, how do ultrasonic waves exert this effect? Is ultrasonically treated milk produced commercially?*

A.—Ultrasonic treatment of milk will not alone impart to it long-keeping properties. The treatment, however, does so stabilize the milk emulsion that no detectable damage occurs when the milk is deep-frozen. Milk which has had such a combined treatment can then be stored under deep-freeze conditions for several years without any spoilage taking place. The thawed-out product is indistinguishable from the original. Provided deep-freeze storage facilities are available the product can be likewise stored successfully even in tropical countries for very long periods.

Frozen milk of this type is being made in this country on a large scale and is being exported. Manufacture is also being undertaken in other countries.

REFERENCES

- ¹ Wearmouth, W. G., *J. Refrig.*, 1960, 3, 56.
² — *Dairy Engng*, 1957, 74, 193.

Intravenous Dextran and Plasma Volume

Q.—*How rapidly is intravenous dextran metabolized and excreted, and does this correspond with the time it is effective as an expander of the plasma volume?*

A.—Dextran is metabolized slowly in man over a period of several months,¹ but the time during which it will remain in the circulation and act as a effective expander of the plasma volume is related to the molecular weight of the material infused. Dextran particles of molecular weight below 50,000 tend to diffuse through the capillary wall into the tissue fluid or are excreted rapidly via the kidney. Present-day preparations are highly fractionated, and the molecular weight of most of the particles in British dextran solutions lies between 125,000 and 250,000. Such material is well retained within the blood vessels, and, in general, not more than 10% is excreted in the urine within 24 hours and only 15 to 20% in 48 hours.² During this time, therefore, the dextran remains effective as an expander of the plasma volume.

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- ¹ Squire, J. R., Bull, J. P., Maycock, W. d'A., and Ricketts, C. R., *Dextran: Its Properties and Use in Medicine*, 1955. Blackwell, Oxford.
² Wilkinson, A. W., and Storey, I. D. E., *Lancet*, 1953, 2, 956.

Correction.—In the Medical Memorandum by Drs. M. D. McGrath and R. G. Paley (November 5, page 1364) the chloride radical was inadvertently omitted from the formula for chlorpromazine with the result that the formula actually denoted promazine.

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